FTS - 32488/2014

FTS → 29122

113

F.No. 11-75/2013.Sch.-5
Government of India
Ministry of Human Resource Development
(School-5 Section)

New Delhi, Shastri Bhawan
Dated : 17.06.2014

Subject: National Policy on Information & Communication Technology in School Education to adopt free & open source software (FOSS) Regarding.

Sir/Madam,

The undersigned is directed to refer herewith to a letter received in the Ministry of Human Resource Development on the subject mentioned above and to say that attention of MHRD has been called to the National Policy on Information Communication Technology (NPICT) in School Education, All Central/State SSC/HSC Boards, CBSE & ICSC Boards prescribe ICT papers. It has been observed that many of the State's SSC/HSC Boards have ICT subject in their curriculums and conduct the examination on ICT papers. Software like Adobe Photoshop, Adobe Illustrator, M.S. Window, M.S. Office software has been made mandatory for framing and answering in the examination by the Boards and a huge amount is spent for acquiring proprietary software by the affiliated schools. This decision of Boards etc. is not in line with NPICT in school education. There is a concern that the amount spent on acquiring proprietary licensed software is recovered from the students, which brings a serious implication on poor and needy students.

2. As you are aware that the national ICT policy in School Education underlines a preference to adopt free and open source software-opening system and software application in order to expand the range of learning, creation and sharing. The ICT Curriculum developed by NCERT for the ICT@ Schools Scheme of the MHRD is based on a Free and Open Source Platform and includes an operating system with pre-installed software for all application. State Government is advised to adopt the ICT Curriculum and model your syllabi around this curriculum.

3. In the light of above you may consider and advisory to be issued to all educational bodies in the States/UT, to guide and suggest multiple and generic alternatives for the ICT content and to prefer free and open source alternatives, making ICT education cost effective and ethical.

4. The action taken report may be furnished to this Ministry at the earliest.

(Subhendu Das)
Under Secretary (RMSA-1)
o/c

To

Education Secretary (All States/UTs) 35 Letters 23/6/14

Copy to:-

1. RMSA State Project Director of all States/UTs
2. P.A. Inamdar, Member CABE.
3. Joint Director, CIET/NCERT

23/6/14

IN THE HIGH COURT OF JUDICATURE AT BOMBAY
CIVIL APPELLATE JURISDICTION

PUBLIC INTEREST LITIGATION NO. 141 OF 2015

Milind S. Oka. ... Petitioner.
V/s.
The Union of India and others. ... Respondents.

Vijay Patil for the petitioner.
G.Hariharan i/b. A.A.Ansari for respondent No.1.
Mrs.M.P.Thakur, AGP for the State.

CORAM : DR.MANJULA CHELLUR, C.J.
AND M.S.SONAK, J.

DATE : 8th December 2016.

P.C. :

The grievance of the petitioner in this petition relates to the Government of India Notification dated 17th June 2014 regarding implementation of guidelines of National Policy on ICT (Information, Communication and Technology) in school education by the schools and colleges in the State of Maharashtra. The concerned department who has to answer the grievances raised in this petition is School Education Department and Higher and Technical Education Department. It is also brought to our notice that the Information Technology Department has to formulate a scheme which is to be

implemented through Education Department. An Expert Committee seems to have been appointed to study and submit the report of overall evaluation of the system which is already in existence and to suggest improvements, if any, needed for implementation of the scheme. According to the respondent, this committee is expected to submit its report by March 2017 so that they would be able to start implementation of the scheme from 2017-18 in all probability. However, the Government has also raised an uncertainty while saying that their decision or the future course of action will depend upon the report of the committee.

2. We make it clear that there cannot be any negative course of action since the Government is bound to implement the scheme. There may be some modification, if any, to the proposal by the Committee but it cannot be brought in toto. Therefore, the petition is kept pending in order to know the progress of the scheme. Stand over to 31st March 2017.

(M.S.SONAK, J.) CHIEF JUSTICE

IN THE HIGH COURT OF JUDICATURE AT BOMBAY

CIVIL APPELLATE JURISDICTION

PUBLIC INTEREST LITIGATION NO.141 OF 2015

Milind S. Oka .. Petitioner
Versus
Union of India & Ors .. Respondents

...

Mr.V.P. Patil for the petitioner.
Mrs.M.P. Thakur, AGP for the State.

CORAM: DR. MANJULA CHELLUR, CJ. &
N.M. JAMDAR, J.
DATED: 1st SEPTEMBER, 2017

P.C.:-

1 Not on board. Taken on board on being mentioned.

2 The petitioner who is visually impaired seeks following direction in this PIL.

> (a) To direct Respondent No.2 State of Maharashtra to follow Annexure – A by removing all proprietary software product names from the syllabi of MSA-CIT (Maharashtra State Advance Certificate in Information Technology)/**MS-CIT** (Maharashtra State Certificate in Information Technology), schools, colleges, universities and other Government recognized education institutions and other State Government offices and institutions, which is against the notification Annexure -A issued by the Respondent No.1 Union of India.

Tilak

3 We find that it would be appropriate if the issue is first looked into by the Chief Secretary, State of Maharashtra, who can take a decision whether it is feasible to accept the suggestions of the petitioner considering all aspects, including technical and administrative issues.

4 Registry shall send a copy of the PIL to the Chief Secretary, State of Maharashtra, who shall consider the same as the representation of the petitioner and take a necessary decision, if he finds that the suggestions of the petitioner are feasible.

5 Chief Secretary, if advised, may call the petitioner for a personal meeting to understand his suggestions.

6 PIL is disposed of accordingly.

(N.M. JAMDAR, J) **(CHIEF JUSTICE)**

Tilak

To,

February 2, 2015

Secretary
Department of School Education and Literacy
Shastri Bhavan, New Delhi 110001.

Sub – NVEQF syllabi violating National Policy on ICT in School Education

Dear Ms. Vrinda Swarup,

We commend the efforts and public investments made towards integration of ICT into education in our country. In this context, we feel it is critical to adopt and promote the use of free and open source software (FOSS) applications in all areas, where proprietary applications are currently in use. This is especially so since appropriate FOSS is now available for most areas. There are several benefits of adopting FOSS, conversely the adoption of proprietary software has serious harmful effects on learning and the education system. Such effects are explained further in this letter.

Indeed, recognising the importance of promoting FOSS in education, MHRD has issued the **'National Policy on ICT in school education', June 2012**, which requires the use of FOSS. Subsequently, MHRD has issued a circular in June 2014, in which the prescription of proprietary software in syllabi has been identified as having iniquitous implications and the use of FOSS as economical and ethical.

In this light, it is unfortunate that the PSS Central Institute of Vocational Education has released text books for the NVEQF (National Vocational Education Qualification Framework) programme that require the use of proprietary applications. The courses on text editing / word processing and on spreadsheet are based on proprietary software. While the book does mention that FOSS options are available, all examples and images used are of proprietary applications. This is quite unnecessary since free and open source Office Suite software is available and widely used. In fact, free and open source software based Office suite is already part of the ICT Curriculum for schools, which has been launched by NCERT.

It is our understanding that the Sector Skills Councils have been asked by MHRD to frame the syllabus for vocational education in their domains. In the case of IT, the sector skills council may represent the interests of dominant vendors which is not necessarily that of the industry or that of the students. While the dominant vendors will want that their products continue to monopolise the syllabus, this is not in the interest of either learning or society.

We would like to make two key points in this context:

1. Learning needs to be about process-related knowledge in any industry, since the products used in such learning would probably be obsolete by the time the students enter the job market. Hence encouraging students to learn the processes will help them to have an open mind, and build and enhance their skills, rather than restricting it to the limited functionality of proprietary software. Students who have learnt FOSS tools can easily adapt to proprietary software should these be used in their work places, just as a person who has learnt to drive one kind of an automobile can still become a driver in a company, driving another kind of automobile. Similarly we need to learn to do 'text editing', rather than learning a specific product like MS Word or LibreOffice Writer.

2. Secondly, use of FOSS can significantly encourage self-employment opportunities by lowering entry costs. This is not possible with proprietary software - students will find it difficult if not impossible to purchase licenses of software, whether MS Office or CAD or Film making or DTP tools. Similarly, most small scale enterprises are keen to use FOSS applications and platforms, and therefore employment opportunities in SMEs can be enhanced by a knowledge of, or experience with using FOSS tools. More specific reasons why the course should be based on FOSS and not on proprietary software is provided in Annexure.

Hence we request that MHRD issues instructions to the PSS Central Institute of Vocational Education to withdraw the text books prepared and replace them with text books that use FOSS Office suite. In fact the learning materials for FOSS Office suite is itself available as open educational resources, so that such a replacement will be quite simple.

In light of the educational, economic and technological implications of procuring proprietary resources in various programs in education, there is a critical need to avoid prescribing proprietary resources. We look forward to your support in promote the use of public software and open digital resources in education to promote equitable and ethical learning.

Yours truly,

Gurumurthy Kasinathan, Director IT for Change

(Guru@ITforChange.net)

on behalf of

Signatories (PTO)

Enclosed – MHRD Circular on avoiding proprietary software in syllabi

Annexure – Need to adopt FOSS in education – pedagogical, economic and political reasons

The adoption of ICTs in education is essentially an educational issue, rather than a technology issue, hence our policy and program need to be anchored in sound educational perspectives. Since curriculum is the primary process of directing teaching towards fulfilling educational aims, digital learning resources (content) and digital learning tools/ processes (software applications), which together constitute curricular resources, need to comply with established curricular principles. An important principle of public education systems is that **curricular resources need to be publicly owned**, so that they are freely available to teacher educators, teachers and students without restrictions. In the case of traditional print media (books), the public education system does *not* use *proprietary* curricular resources, since that prevents the schools, teachers and students from freely sharing the resources and from customising them for their local needs. In the same manner, proprietary (*meaning privately owned, which is prohibited by the owner, from being shared or modified*) software and proprietary content should not be used in education.

Proprietary software and content forces the teacher and the student to be a 'mere user'; treating these resources as a 'given'. Teachers, schools and the entire public education system become completely dependant on the vendor for any modifications, enhancements, customisations or localizations (creating local language versions) to these tools, and have no right to modify or freely share these resources with one another. Proprietary resources thus do not allow the needed experimentation, collaborative construction, and local/ contextual enhancement of learning processes, important new opportunities offered by digital technologies, required to meet the constructivist ideals aspired for by numerous policy documents including the National Curriculum Framework 2005.

In addition, the use of publicly owned software has other important advantages:

1. Since publicly owned software applications are free to procure and share, the costs of using freely shareable software applications would be much lower specially for implementing at a large scale, where the necessary support systems are feasible to build. An IIM-Bangalore study estimate that on a conservative basis, Kerala IT@Schools program has saved 50 crores on software license fees and India would save 20,000 crores each year by adopting a similar approach.

2. The free GNU/Linux operating system is virus-resistant and this can hugely reduce maintenance and support efforts and resources. Many computers in educational institutions tend to remain unused due to virus issues and using GNU/Linux would increase infrastructure availability.

3. Upgrades can also be done easily and freely every year, whereas proprietary software is usually not upgraded owing to its financial implications.

4. Proprietary software being 'closed' can contain malicious code and trojans which can infiltrate computers

and do surveillance. This constitutes a real political risk, and on security considerations as well, proprietary software needs to be avoided.

Public software for vocational education (IT)

There are public software applications (which by virtue of public ownership are freely shareable and customisable) for all areas where proprietary software applications have been used. Applications specific to vocational education are available

FOSS applications for regular use in organizations

Area	**Proprietary software**	**FOSS**
Operating system	Microsoft Windows	Ubuntu GNU-Linux / Bhartiya Open Source System (CDAC)
Office Applications	Microsoft office	Open Office / LibreOffice / Bhartiya OpenOffice (CDAC)
Email client	Microsoft outlook	Mozilla Thunderbird / Evolution
Internet Browser	Internet Explorer	Mozilla Firefox / Chrome
E-learning system		Moodle, EdEx

FOSS applications relevant to vocational education

Area	**Vocational software**
Animation / Drawing / Design	QCAD, LibreCAD, Blender
Audio editing	Audacity
Desktop Publishing	GIMP, Inkscape, Scribus
Geographical Information System	QGIS, Open Street Map
Statistical analyses	PSPP, R
Video editing	PiTiVi, Kdenlive, Openshot
Website / Content Management	Drupal, Wordpress

Signatories

1. Alex M George, Education Researcher, Bangalore
2. Amman Madan, Azim Premji University, Bangalore
3. Anita Rampal, Central Institute of Education, Delhi University, Delhi
4. Anjali Noronha, Ekalavya, Hoshangabad
5. Anusha Ramanathan, University of Mumbai
6. Anvar Sadath, Kerala
7. Archana Mehandale, Independent Researcher - Education
8. Chandita Mukherjee, Comet Media Foundation, Mumbai
9. Farida Abdulla Khan, Department of Educational Studies, Jamia Millia Islamia
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11. Geetha Narayanan, Srishti School of Art, Design and Technology, Bangalore
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13. Gurumurthy Kasinathan, IT for Change, Bangalore
14. Gurveen Kaur, Centre for Learning, Hyderabad
15. Hriday Kant Dewan, Vidya Bhavan Society, Udaipur
16. Jacob Tharu, formerly at Central Institute of English and Foreign Languages , Hyderabad
17. Jayasree Subramnian, TISS Hyderabad
18. John Kurrien, Pune
19. Kishore Darak, Researcher, Pune
20. Nagarjuna.G.N, Tata Institute of Fundamental Research, Mumbai
21. Nandini Manjrekar, Tata Institute of Social Sciences, Mumbai
22. Padma Sarangapani, Tata Institute of Social Sciences, Mumbai
23. Poonam Batra, Maulana Azad Centre for Elementary and Social Education, CIE, Delhi University
24. R Ramanjunam, Institute of Mathematical Sciences, Chennai
25. Ramagopal K, Centre for Learning, Hyderabad
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27. Ravi Subramaniam, Homi Bhabha Centre for Science Education, Mumbai
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29. Rohit Dhankar, Digantar
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